

TWO NEW LAELAPTID SNAKE MITES FROM KOREA

(Acarina: Laelaptidae)

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While serving with the 5th Air Force in Korea during 1953, I collected a series of new laelaptid mites from two species of snakes. Most of these mites were located under the scales in the ventral area of the head. However, a few were found beneath scales on other parts of the body.

Dr. Vasco M. Tanner of the Brigham Young University, Provo, Utah was kind enough to identify these snakes as *Elaphe dione* (Pallas) and *Natrix tigrina lateralis* (Berthold).

Radford (1946) established a new genus *Ophidilaelaps* for a laelaptid mite taken from a copper-headed rat snake (*Coluber radiatus* Schlegel) collected in Imphal, Manipur State, India. The sternal plate in this genus is broader than long and is provided with one or two pair of setae.

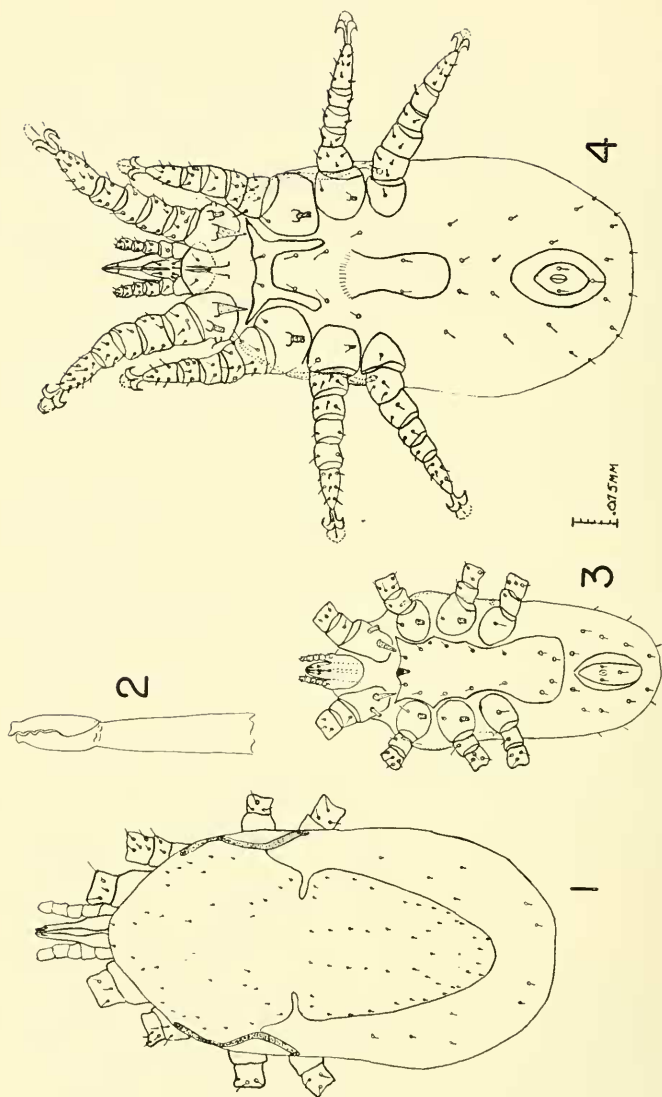
In 1918, Berlese gave a short description of a laelaptid mite found on snakes at Florence, Italy and named this species *Laelaps piger*; however Radford concludes that this is not a true *Laelaps*, because of the presence of only two pairs of setae on the sternal plate and in having only one pair of setae on the genito-ventral plate. The dorsal plate is also partially divided in an area located between the third and fourth coxae and therefore this mite was renamed *Ophidilaelaps piger* (Berlese).

The two species of snake mites discussed in this paper follow Radford's genus *Ophidilaelaps* in having a reduced sternal plate with one or two pair of sternal setae and one pair of setae on the genito-ventral plate. A partial or fully divided dorsal plate appears to be a species variation.

OPHIDILAEALAPS **TANNERI** n. sp.

Female. (Fig. 4, plate I). Body length, excluding gnathosoma, 747 u and body width 390 u. *Venter*. Antero-lateral angles of the sternal plate projecting between coxae I and II; anterior margin convex; lateral margin slightly concave; posterior margin concave; posterior lateral projections of sternal plate level with anterior edge of coxae III. Only the first pair of sternal setae are borne upon the sternal plate; second pair of setae are level with middle of coxae II, just on the inside of the posterior lateral projection of the sternal plate; third pair of setae at the posterior lateral angles, even with the anterior edge of coxa III; fourth pair of setae slightly below the middle of

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Explanation of Plate I — *Ophidilaclaps tanneri* n. sp.

Fig. 1, Female dorsal; Fig. 2, Female, chelicera; Fig 3, Male, ventral; Fig. 4, Female, ventral.

coxa III. The 2nd, 3rd and 4th pair of satae do not appear to be borne upon the sternal plate. Some specimens examined had the

second pair of setae on the edge of the posterior lateral projection. Genito-ventral plate flask-shaped, bearing the paired genital setae level with the posterior edge of coxa IV. Anal plate ovoid, 168 u long and 99 u wide; anus in middle of plate. The paired anal setae level with middle of anus; unpaired seta at the posterior end of anal plate.

Posterior to the genito-ventral plate and anterior to the anal plate, in the soft integument of the opisthosoma, are four pairs of setae. Flanking the anal plate are two pairs of setae and close to the posterior margin of the body are two pairs of setae, with three pairs of setae on the posterior margin. *Dorsum*. (Fig. 1.) In the female the dorsal plate is partially divided. The anterior portion covers the dorsum from the anterior margin of the body to the level of leg IV. The dorsal plate is partially divided at a level of leg IV; then converging to a rounded point posteriorly, leaving an exposed area of soft integument between it and the posterior-lateral margin of the body. On the anterior portion of the dorsal plate are 19 pairs of setae and on the posterior portion of the dorsal plate are 23 pairs of setae. Six pairs of setae are borne on the soft integument, posterior to the dorsal plate.

Legs. Legs short and stout. Legs I stouter than II, III and IV. Coxae I is provided with a stout distal spur 49 u long and 19 u wide at the base and a short median spur 24 u long; coxae II and III have one seta each and a short spur. The spur on coxae II is bifid. On some paratypes the median spur on coxae I and the spur on coxae II and III are bifid. Coxae IV with one simple seta. Peritremes extending from coxae IV to the middle of coxae I and II.

Gnathosoma. Chelicerae chelate; (Fig. 2); movable finger has three teeth and unmovable finger has two teeth with a tooth-like hooked end on the movable finger; chela 33 u long. Palps of usual form 105 u long from base of trochanter to tip. Hypostome 66 u long with three pairs of setae, extends to the posterior margin of palpal tibia. Tritosternum not barbed, 105 u long. *Male* (Fig. 3). Length from posterior margin to the anterior tip of the dorsal plate 546 u. Maximum width 247 u. Chela 45 u long. Palps of usual form 81 u long from tip to base. Hypostome 60 u long. Male similar in appearance to the female.

Host -Snake (*Natrix tigrina lateralis* (Berthold)).

Locality-Seoul, Korea, 20 May 1953.

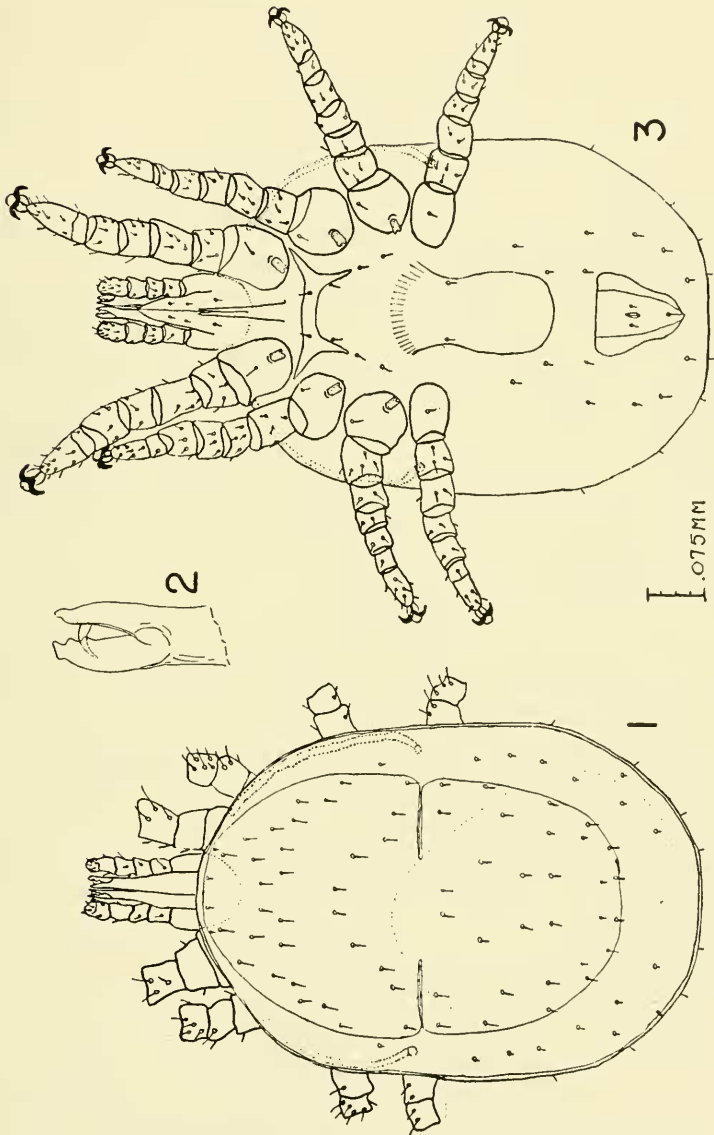
Material-Holotype female and allotype male and four paratype females deposited in the U. S. National Museum. U.S. Nat. Mus.

No. 2201.

Remarks—Ten females and one male were collected from a snake *Natrix tigrina lateralis* (Berthold) near Seoul, Korea, 20, May, 1953. The snake was chloroformed and placed under a stereoscope microscope for observation. The majority of mites were located on the ventral side of the head under the scales. However, a few were found under the lateral scales of the body. In most cases the hysterosoma was protruding from under the scales and the mite was easily located. *Ophidilaelaps tanneri* differs from all other species in this genus in having a stout distal spur and short median spur on coxae I and in having a partially divided dorsal plate at a level of leg IV. The sternal plate has one pair of setae. This mite has been named for Dr. V. M. Tanner, eminent professor, who has inspired many students in the study of zoology at Brigham Young University, Provo, Utah.

OPHIDILAEALAPS **FARRIERI** n. sp.

Female. (Fig 3, Plate II). Body length excluding gnathosoma, 637 u and body width 468 u. *Venter.* The sternal plate has the same shape as *O. tanneri* except the posterior lateral projections of the sternal plate only extend slightly past the center of coxae II. The first pair of sternal setae are located on the sternal plate; second pair of setae are level with middle of coxae II, just on the inside of the posterior lateral projection of the sternal plate; third pair of setae at the posterior end of the lateral projection; fourth pair of setae even with the middle of coxae III. The genito-ventral plate is drop-shaped, bearing one pair of genital setae level with coxae IV. Anal plate triangular, 123 u long and 142 u wide; anus in center of plate. The paired anal setae level with middle of anus; unpaired seta at the posterior end of anal plate. Posterior to the genito-ventral plate and anterior to the anal plate in the soft integument of the opisthosoma are four pairs of setae. In the area on each side of the anal plate are three pairs of setae and on the posterior margin are four pairs of setae. Peritremes extending from the middle of coxae IV to the middle of coxae I. *Dorsum.* (Fig. 1). The dorsal plate is partially divided at a level with coxae IV; eighteen pairs of setae on the anterior half of the dorsal plate, and fifteen pairs of setae on the posterior half. An exposed area of soft integument lies between the dorsal plate and the posterior-lateral margin of the body; eight pairs of setae are located in this area. *Legs.* (Fig. 3). Legs are rather stout. Legs I stouter than legs II, III and IV. All setae on legs are



Explanation of Plate II — *Ophidilaelaps farrieri* n. sp.
Fig. 1, Female, dorsal; Fig. 2, Female, chela; Fig. 3, Female, ventral.

spine-like. Femur and genu have three or four pairs of extra long stout dorsal setae. Coxae I, II and III are each provided with a stout distally bifid spur and seta. Coxae IV each with a simple seta. Chaetotaxy of ventral side of legs as figured. Claws well developed. *Gnathosoma*. Palps five segmented; hypostome extends to the center of palp tibia. Three pairs of setae on hypostome as figured. Chelicera (Fig. 2) with a pilus dentilis.

Male-unknown.

Host—*Elaphe dione* Pallas.

Location—Aesium-Ni, Korea, 23, May, 1953.

Material—Holotype female deposited in the U.S. National Museum. U.S. Nat. Mus. No. 2202.

Remarks—One female *Ophidilaelaps farrieri* was found under a lateral scale about two inches from the head of a snake, *Elaphe dione* Pallas, in Korea. This mite differs from other *Ophidilaelaps* in that coxae I, II and III are each provided with a stout distally bifid spur and seta. Paired anal setae are lateral, not posterior to anus. The dorsal plate is divided at a level of coxae IV. This mite has been named after Lt. M. H. Farrier, a fellow Acarologist in Korea, who made the days pass faster.

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